

B 3945 US

Claims

1. A method of producing brushes comprising the steps of

- providing brush bodies of a plastics material, said brush bodies each having an attachment surface portion,
- providing platelets of a plastics material, said platelets each having tufts of brush bristles attached thereto and projecting from a first face,
- connecting each platelet to an attachment surface portion of a brush body by ultrasonic welding;

wherein said platelets each have a peripheral rim on a second face opposite the first face, said peripheral rim defining an edge, and said platelet contacting said attachment surface along said edge and acting as an energy concentrator.

2. The method of claim 1, wherein said edge tapers toward said attachment surface portion.

3. The method of claim 1, wherein said brush bodies are provided with a recess and said attachment surface portion is located at the bottom of the recess.

4. The method of claim 3, wherein said edge engages said attachment surface portion by its tapered end and the weld joint is produced at said attachment surface portion.

5. The method of claim 4, wherein an extension projecting beyond said recess of said brush body is formed at said peripheral rim of said platelet.

6. The method of claim 5, wherein said extension is made to contact ~~rests~~ a surface area of said brush body surrounding said recess.
7. The method of claim 6, wherein said extension is provided with an edge which tapers toward said brush body and acts as an energy concentrator in ultrasonic welding.
8. The method of claim 5, wherein said extension is inserted in a stepped widened portion of said recess in said brush body.
9. The method of claim 6, wherein said extension is formed in such a way that it protrudes as far as into a transition region of said brush body which corresponds to the neck piece of a toothbrush.
10. The method of claim 1, wherein a pressing means is provided for pressing said platelet against said brush body during the ultrasonic welding.
11. The method of claim 1, wherein a gap left between said platelet and said brush body is closed by a plastics mass.
12. The method of claim 1, wherein a gap left between said platelet and said brush body is closed by molding in an injection mold.
13. A method of producing brushes comprising the steps of
  - providing brush bodies of a plastics material, said brush bodies each having an attachment surface portion,
  - providing platelets of a plastics material, said platelets each having tufts of brush bristles attached thereto and projecting from a first face,
  - providing means for applying an adhesive in order to connect said platelets to said attachment surface portion of said brush bodies by glueing;

wherein said brush bodies and said platelets are made of the same plastics material, said brush bodies are provided with a recess in which the platelet is inserted to fit and said attachment surface portion is located at the bottom of said recess.

5        14. The method of claim 1, wherein an injection mold is provided in which part of said brush body with said platelet inserted therein is provided for molding around at least the peripheral region of said platelet.

10       15. The method of claim 13, wherein an injection mold is provided in which part of said brush body with said platelet inserted therein is provided for molding around at least the peripheral region of said platelet.

16. The method of claim 1, wherein an ultrasonic welding means is provided in combination with a means for applying an adhesive.

15       17. The method of claim 13, wherein said platelets have a peripheral rim on a second face opposite the first face, said peripheral rim defining an edge, and said platelet contacting said attachment surface along said edge, characterized in that in addition there is provided an ultrasonic welding means.

20       18. The method of claim 1, wherein said brush bodies are provided with a recess having a peripheral wall converging obliquely toward the interior, in that said platelet has a peripheral wall matching said peripheral wall of said recess and is fittingly inserted in said recess, and in that said platelet is attached in said recess by ultrasonic welding or by means of an adhesive.

19. The method of claim 1, wherein said brush bodies and said platelets are made of the same plastics material.